AMENDMENTS TO THE SPECIFICATION

Please replace the paragraph beginning at page 5, line 23 with the following amended paragraph:

--Thus, there is a need to develop effective phototherapeutic agents. Phototherapeutic efficacy can be substantially improved if both Type 1 and Type 2 units are integrated into a single composition. This can be accomplished using three types of ~~formulation~~ formulations: (a) homogeneous mixtures of Type 1 or Type 2 agents alone, (b) heterogeneous mixtures of Type 1 and Type 2 agents, or (c) a single molecular entity containing both Type 1 and Type 2 functionalities. --

Please replace the paragraph beginning at page 6, line 4 with the following amended paragraph:

--The present invention discloses novel compounds including organic azides for phototherapy of tumors and other lesions. More specifically, the present invention discloses compounds having the formula

E----L----DYE----X-----N_3

wherein DYE is an aromatic or a heteroaromatic radical derived from the group consisting of cyanines, indocyanines, phthalocyanines, rhodamines,phenoxazines, phenothiazines, phenoselenazines, fluoresceins, porphyrins, benzoporphyrins, squaraines, corrins, croconiums, azo dyes, methine dyes, and indolenium dyes. E is selected from the group consisting of somatostatin receptor binding molecules, ~~heat sensitive bacterioendotoxin~~ ST receptor binding molecules, neurotensin receptor binding molecules, bombesin receptor binding molecules, cholecystekinin receptor binding molecules, steroid receptor binding molecules, and carbohydrate receptor binding molecules. L is selected from the groupconsisting of $-(CH_2)_a-$, $-(CH_2)_bCONR^1-$, $-N(R^2)CO(CH_2)_c-$, $-OCO(CH_2)_d$, $-(CH_2)_eCO_2$,-OCONH-, -000_2, -HNCONH-, -HNCSNH-, -HNNHCO-, $-OS0_2$, $-NR^3(CH_2)_eCONR^4-$, $-CONR^5(CH_2)_fNR^6CO-$, and $-NR'CO(CH_2)_9CONR^8-$. X is either a single bond or is selected from the group consisting of $-(CH_2)_h-$, -000-, -HNCO-, -(CH2);CO-, and $-(CH_2)_i000-$. R^1 to R^8 are independently selected from the group consisting of hydrogen, C1-010 alkyl, -OH, C1-010 polyhydroxyalkyl, C1-C10 alkoxyl, C1-C10 alkoxyalkyl, $-SO_3H$, $-(CH_2)_kCO_2H$, and $-(CH_2)$, NR^9R^{10}. R^9 and R^{10} are independently selected from the group consisting of hydrogen, C1-010. alkyl, C5-C10 aryl, and C1-C10 polyhydroxyalkyl. And a to I independently range from 0 to 10. --

Please replace the paragraph beginning at page 7, line 3 with the following amended paragraph:

--The present invention also discloses a method of performing a therapeutic procedure using the compounds of the present invention. An effective amount of organic azide photosensitizer having the formula

E----L----DYE----X-----N_3

is administered to a subject. In this formula, DYE is an aromatic or a heteroaromatic radical derived from the group consisting of cyanines, indocyanines, phthalocyanines, rhodamines, phenoxazines, phenothiazines, phenoselenazines, fluoresceins, porphyrins, benzoporphyrins, squaraines, corrins, croconiums, azo dyes, methine dyes, and indolenium dyes. E is a hydrogen atom or is selected from the group consisting of somatostatin receptor binding molecules, ~~heat sensitive bacterioendotoxin~~ ST receptor binding molecules, neurotensin receptor binding molecules, bombesin receptor binding molecules, cholecystekinin receptor binding molecules, steroid receptor binding molecules, and carbohydrate receptor binding molecules. L is selected from the group consisting of -$(CH_2)_a$-, -$(CH_2)_b$$CONR^1$-, -$N(R^2)CO(CH_2)_c$-, -$OCO(CH_2)_d$-, -$(CH_2)_e$$CO_2$-,-OCONH-, -$000_2$-, -HNCONH-, -HNCSNH-, -HNNHCO-, -OSO_2-, -$NR^3(CH_2)_e$$CONR^4$-, -$CONR^5(CH_2)_f$$NR^6CO$-, and -$NR'CO(CH_2)_g$$CONR^B$-. X is either a single bond or is selected from the group consisting of -$(CH_2)_h$-, -OCO-, -HNCO-, -(CH2),CO-, and -(CH2),000-. R^1 to R^8 are independently selected from the group consisting of hydrogen, C1-C10 alkyl, -OH, C1-C10 polyhydroxyalkyl, C1-C10 alkoxyl, C1-C10 alkoxyalkyl, -SO_3H, -$(CH_2)_k$$CO_2H$, and -$(CH_2)$$NR^9R^{10}$. R^9 and R^{10} are independently selected from the group consisting of hydrogen, C1-C10 25 alkyl, C5-C10 aryl, and Cl-C10 polyhydroxyalkyl. And a to I independently range from 0 to 10. Following administration, the photosensitizer is allowed to accumulate in target tissue which is exposed to a light of wavelength between 300 and 950 nm. This light has sufficient power and fluence rate to cause necrosis or apoptosis of the said target tissue. --

Please replace the paragraph beginning at page 10, line 12 with the following amended paragraph:

--In one embodiment, azides according to the present invention have the general formula 1 above wherein DYE is an aromatic or a heteroaromatic radical derived from the group consisting of cyanines, indocyanines, phthalocyanines, rhodamines, phenothiazines, fluoresceins, porphyrins, benzoporphyrins, and corrins; E is selected from the group consisting of somatostatin receptor binding molecules, ~~heat sensitive bacterioendotoxin~~ (ST) receptor binding molecules, neurotensin receptor binding molecules, bombesin receptor binding molecules, cholecystekinin (CCK) receptor binding molecules, steroid receptor binding molecules, and carbohydrate receptor binding molecules; L is selected from the group consisting of -HNCO-, -$CONR^1$-, -HNCONH-, -HNCSNH-, -HNNHCO-,-$(CH_2)_a$$CONR^1$-,-$CONR^1(CH_2)_a$$NR^2CO$-, and

$-NR^1CO(CH_2)_aCONR^2-$; R^1 and R^2 are independently selected from the group consisting of hydrogen, C1-C10 alkyl, C1-C10 polyhydroxyalkyl; and a, b, and c independently range from 0 to 6.--

Please replace the paragraph beginning at page 11, line 1 with the following amended paragraph:

--In an alternative embodiment, azides according to the present invention have the general formula 1 above wherein DYE is an aromatic or a heteroaromatic radical derived from the group consisting of cyanines, phthalocyanines, rhodamines, porphyrins, benzoporphyrins, and corrins; E is a selected from the group consisting of octreotide and octreotate peptides, ~~heat-sensitive bacterioendotoxin~~ ST receptor binding peptides, carcinoembryonic antigen antibody (anti-CEA), bombesin receptor binding peptide, neurotensin receptor binding peptide, cholecystekinin receptor binding peptide, and estrogen steroids; L is selected from the group consisting of -HNCO-, $-CONR^1-$, -HNCSNH-,

$-HNNHCO-$,$-(CH_2)_aCONR^1-$,$-CONR^1(CH_2)_aNR^2CO-$, and R^1 and R^2 are independently selected from the group consisting of hydrogen, C1-C10 alkyl, C1-C5 polyhydroxyalkyl; and a, b, and c independently range from 0 to 6.—

Please replace the paragraph beginning at page 11, line 13 with the following amended paragraph:

-- These compounds operate by a dual mechanism as shown in Fig. 1. N_3 is the azide moiety that produces nitrene upon photoactivation and DYE is an aromatic chromophore that undergoes photosensitization and produces singlet oxygen for PDT. Aliphatic azido compounds can also be used for phototherapy, but may require high-energy light for activation unless the azide moiety is attached to conjugated polyene system. L is a linker between the chromophore and the epitope. Epitope (E) is a particular region of the molecule that is recognized by, and binds to, the target site on the cell. An epitope is usually, but not always, associated with biomolecules, which includes hormones, amino acids, peptides, peptidomimetics, proteins, nucleosides, nucleotides, nucleic acids, enzymes, carbohydrates, glycomimetics, lipids, albumins, mono- and polyclonal antibodies, receptors, inclusion compounds such as cyclodextrins, and receptor binding molecules. Specific examples of biomolecules include steroid hormones for the treatment of breast and prostate lesions, somatostatin, bombesin, and neurotensin receptor binding molecules for the treatment of neuroendocrine tumors, cholecystekinin (CCK) receptor binding molecules for the treatment of lung cancer, ~~heat sensitive bacterioendotoxin~~ (ST) receptor and carcinoembryonic antigen (CEA) binding molecules for the treatment of colorectal cancer, dihyroxyindolecarboxylic acid and other melanin producing biosynthetic intermediates for melanoma, integrin receptor and atheroscleratic plaque binding molecules for the treatment of

vascular diseases, and amyloid plaque binding molecules for the treatment of brain lesions. Biomolecules for use in the present invention may also include synthetic polymers. Examples of synthetic polymers include polyaminoacids, polyols, polyamines, polyacids, oligonucleotides, aborols, dendrimers, and aptamers. Coupling of diagnostic and radiotherapeutic agents to biomolecules can be accomplished by methods well known in the art, as disclosed in Hnatowich et al., *Radioactive Labeling of Antibody: A simple and efficient method.* Science, 1983, 220, 613-615; A. Pelegrin et al., *Photoimmunodiagnosis with antibody-fluorescein conjugates: in vitro and in vivo preclinical studies.* Journal of Cellular Pharmacology, 1992, 3, 141-145; and U.S. Patent No. 5,714,342, each of which is expressly incorporated by reference herein in its entirety. Successful specific targeting of fluorescent dyes to tumors using antibodies and peptides for diagnostic imaging of tumors has been demonstrated by us and others, for example, in S.A. Achilefu et al., *Novel receptor-targeted fluorescent contrast agents for in vivo tumor imaging*, Investigative Radiology, 2000, 35(8), 479-485; B. Ballou et al., *Tumor labeling in vivo using cyanine-conjugated monoclonal antibodies.* Cancer Immunology and Immunotherapy, 1995, 41, 257-263; and K. Licha et al., *New contrast agents for optical imaging: acid-cleavable conjugates of cyanine dyes with biomolecules.* In Biomedical Imaging: Reporters, Dyes, and Instrumentation, D.J. Bornhop, C. Contag, and E.M. Sevick-Muraca (Eds.), Proceedings of SPIE, 1999, 3600, 29-35, each of which is expressly incorporated by reference herein in its entirety. Therefore, the inventive receptor-targeted phototherapeutic agents are expected to be effective in the treatment of various lesions. --

Please replace the paragraph beginning at page 14, line 3 with the following amended paragraph:

--The dye-azide derivatives of the present invention contain additional functionalities that can be used to attach various types of biomolecules, synthetic polymers, and organized aggregates for selective delivery to various organs or tissues of interest. The synthesis of typical dual phototherapeutic agents incorporating both Type 1 and Type 2 mechanisms based on phthalocyanine and cyanine derivatives are shown in Figs. 2 and 3 respectively. Referring to Fig. 2, the diacid 1 can be prepared by the method analogous to phthalocyanine itself described previously in J.E. van Lier and J.D. Spikes, *The chemistry, photophysics, and photosensitizing properties of phthalocyanines*, In Photosensitizing Compounds: Their Chemistry, Biology, and Clinical Use (Ciba Foundation Symposium 146), G. Bock and S. Harnett (Eds.), J. Wiley & Sons, 1989, pp. 17-32, which is expressly incorporated by reference herein its entirety. The diacid 1 can be converted to the corresponding bis active ester in which one of the active esters can be condensed with an azide (by the Type 1 moiety) and the other active ester can be condensed with a biomolecule of interest to yield the phthalocyanine derivative 2. Referring to Fig. 3, the cyanine dye 3 is prepared by the alkylation of 2-methylbenzothiazole with N-succinimydyl bromoacetate followed by condensation with malonaldehyde tetramethyl acetal. One of the

active esters in the cyanine dye 3 can be attached to a Type 1 moiety and the other ester can be attached to a biomolecule to give the dual phototherapeutic agent 4. Specifically, the biomolecules bind to colorectal, cervical, ovarian, lung, and neuroendocrine tumors, and include somatostatin, cholecystekinin, bombesin, neuroendrocrine, and ~~heat sensitive bacterioendotoxin~~ ST receptor binding compounds. The other active ester can be conjugated to an aromatic or an aliphatic azides depending on the wavelength desired for excitation.--

Please replace the paragraph beginning at page 15, line 3 with the following amended paragraph:

--The novel compounds of the present invention may vary widely depending on the contemplated application. For tumors, the biomolecule is selected from the class of tumor markers including, but not limited to, somatostatin, bombesin, neurotensin, cholecystekinin, ~~heat sensitive bacterioendotoxin~~ ST, estrogen, and progesterone receptor binding compounds. For vascular lesions, the biomolecule may be selected from the class of integrins, selectins, vascular endothelial growth factor, fibrins, tissue plasminogen activator, thrombin, LDL, HDL, Sialyl Lewis^X and its mimics, and atherosclerotic plaque binding compounds.--